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Please search APS & BIOSIS:

(1) NAME WOUDENBERG, TIMOTHY M.
BUDNER, KEVIN S.
CONNELL, CHARLES R.
GANZ, ALAN M.
MCBRIDE, LINCOLN J.
SAVIANO, PAUL G
SHIGEURA, JOHN
TRACY, DAVID H.
YOUNG, EUGENE F.
LEE, LINDA G.

(2) Key words: The invention is a system for real-time detection of amplification products. The system uses fluorescence and a fiber optic.

08-15

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Date completed: 8-03-95
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___ Other

USCOMM-DC 90-3952

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  *                  W E L C O M E   T O   T H E                  *
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z, alan?/in; s mcbride, lincoln?/in; s saviano, paul?/in; s shigeura, john?/in;
s tracy, david?/in; s young, eugene?/in; s lee, linda?/in
L1 2 WOUDENBERG, TIMOTHY?/IN

L2 0 BUDNER, KEVIN?/IN

L3 4 CONNELL, CHARLES?/IN

- Author (s)

L4 3 GANZ, ALAN?/IN

L5 2 MCBRIDE, LINCOLN?/IN

L6 2 SAVIANO, PAUL?/IN

L7 1 SHIGEURA, JOHN?/IN

L8 46 TRACY, DAVID?/IN

L9 20 YOUNG, EUGENE?/IN

L10 13 LEE, LINDA?/IN

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or l9 or l10); s l4 and (l5 or l6 or l7 or l8 or l9 or l10)
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L14 2 L3 AND (L4 OR L5 OR L6 OR L7 OR L8 OR L9 OR L10)

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? s s3 and s4

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      S5      2  S3 AND S4
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 5/KWIC/1
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  ...in the F735/F695 ratio at 77.degree. K was related to the
extent of
 fluorescence quenching at room temperature.
Normalization of
low-temperature spectra with fluorescein as an internal
standard
revealed a lowering of F695 that was not accompanied by an
increase in
F735: preillumination...


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  USE OF AN INTERNAL STANDARD FOR SEMI QUANTITATIVE ANALYSIS
OF LOW
TEMPERATURE 77 KELVIN FLUORESCENCE OF PHOTOSYNTHETIC CELLS
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... sample in known proportions. The fluorescence yield of the various
peaks of the sample are normalized to the fluorescence yield of the
internal standard . The spectra are recorded using an inexpensive
attachment consisting of a Dewar holder mounted instead...

... reinhardi] or chlorophyll containing membrane fractions. For this
purpose, phycocyanin [Fremyella diplosiphon] was a suitable internal
standard .
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5/3/1
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

4387576 BIOSIS Number: 77062903
CHARACTERIZATION OF CHLOROPHYLL FLUORESCENCE QUENCHING IN CHLOROPLASTS BY
FLUORESCENCE SPECTROSCOPY AT 77 KELVIN 1. PH CHANGE DEPENDENT QUENCHING
KRAUSE G H; BRIANTAIS J-M; VERNOTTE C
BOTANISCHES INST. UNIV. DUESSELDORF, UNIVERSITAETSSTR. 1, D-4000
DUESSELDORF 1.
BIOCHIM BIOPHYS ACTA 723 (2). 1983. 169-175. CODEN: BBACA
Full Journal Title: Biochimica et Biophysica Acta
Language: ENGLISH

5/3/2
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

3110664 BIOSIS Number: 70060571
USE OF AN INTERNAL STANDARD FOR SEMI QUANTITATIVE ANALYSIS OF LOW
TEMPERATURE 77 KELVIN FLUORESCENCE OF PHOTOSYNTHETIC CELLS
GERSHONI J M; OHAD I
DEP. BIOL. CHEM., HEB. UNIV. JERUS., INST. LIFE SCI., JERUSALEM, ISR.
ANAL BIOCHEM 104 (2). 1980. 315-320. CODEN: ANBCA
Full Journal Title: Analytical Biochemistry
Language: ENGLISH
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$2.50 2 Type(s) in Format 3
$0.00 2 Type(s) in Format 95 (KWIC)

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had discrete hypoechoic nodules. Eight patients with multiple confluent lymph nodes showed evidence of venous invasion. Among 42 patients with a clinically palpable neck mass, 1 showed venous thrombosis in the internal jugular vein, 2 had abscesses, and 3 had normal musculo-skeletal tissues. Among 35 patients with clinically impalpable cervical lymph nodes, 5 patients had cervical lymphadenopathy. All 41 patients with sonographically detectable lymph nodes underwent aspiration cytology or biopsy, and 36 of these showed malignancy, 4 TB lymphadenitis and 1 nonspecific inflammation. No complication was observed in this series. We conclude that ultrasonography is a valuable tool to evaluate cervical lymphadenopathy and to clarify the histopathological features of the affected lymph nodes with the aid of aspiration cytology.

L27 ANSWER 5 OF 6 BIOSIS COPYRIGHT 1995 BIOSIS
AN 89:188403 BIOSIS
DN BR36:88852
TI **REAL TIME** SCANNING ELECTROPHORESIS APPARATUS FOR DNA SEQUENCING.
AU HUNKAPILLER M W; **CONNELL C R**; MORDAN W J; LYTLE J D; BRIDGHAM J A
CS SAN CARLOS, CALIF., USA.
ASSIGNEE: APPLIED BIOSYSTEMS, INC
SO OFF GAZ U S PAT TRADEMARK OFF PAT 1100 (1). 1989. 615. CODEN: OGUPE7 ISSN: 0098-1133

L27 ANSWER 6 OF 6 BIOSIS COPYRIGHT 1995 BIOSIS
AN 88:399108 BIOSIS
DN BA86:71747
TI ULTRASONOGRAPHY OF PANCOAST TUMOR.
AU YANG P-C; **LEE L-N**; LUH K-T; KUO S-H; YANG S-P
CS NATL. TAIWAN UNIV. HOSP., NUMBER 1, CHANG-TE ST., TAIPEI, TAIWAN ROC 10016.
SO CHEST 94 (1). 1988. 124-128. CODEN: CHETBF ISSN: 0012-3692
AB Eleven patients with Pancoast tumor, who failed to yield diagnostic materials by conventional sputum cytology and fiberoptic bronchoscopy, were studied by **real-time** linear-array and sector ultrasonography. The sector scanner through the supraclavicular approach adequately visualized the external profile and the internal texture of the lesions in all 11 patients, which is a significant improvement ($p < 0.05$) over what can be accomplished with linear-array scanner through the intercostal approach. All patients received percutaneous transthoracic aspiration under ultrasound guidance. Positive cytologic diagnosis was established in ten of the 11 patients (91 percent). Additional biopsies performed in seven patients under similar ultrasonic guidance also provided concordant results. No complications were observed in this series. This study has clearly shown that ultrasound-guided aspiration biopsy can be a safe and useful means for obtaining materials for pathologic confirmation of Pancoast tumor. It may also assist in defining the tumor extension to pleura and adjacent structures.

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L17           0 L9 AND L10


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        781316 DETERM?
        462605 DETECT?
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L21         13 L13 OR L20

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L21  ANSWER 1 OF 13  BIOSIS  COPYRIGHT 1995 BIOSIS
AN   94:532761  BIOSIS
DN   97545761
TI   A rapid method to study the relationship between IDDM and HLA-DQ-beta
     57 ASP.
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Horlick
235411

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ganz a ?/au; s mcbride l ?/au; s saviano p ?/au; s shigeura j ?/au; s
tracy d ?/au; s young e ?/au; s lee l ?/au
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CAS REGISTRY NUMBERS (R) LAST ADDED: 30 July 1995 (950730/UP)

As of December 31, 1993 the BIOSIS File will be updated weekly with
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- Author(s)

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L3           44 CONNELL C ?/AU

L4            7 GANZ A ?/AU

L5          120 MCBRIDE L ?/AU

L6            0 SAVIANO P ?/AU

L7            0 SHIGEURA J ?/AU

L8           27 TRACY D ?/AU

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E4            1     WOODEND A K/AU
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AU Huang Y-W; **Lee L-S**; Shih M-C; Pai Y-H; Lee Y-J; Chang J-G
CS Dep. Molecular Med. and Clin. Pathol., Taipei Municipal Jen-Ai Hosp., 10 Section 4, Jen-Ai Road, Taipei, TAI
SO Tissue Antigens 44 (3). 1994. 155-158. ISSN: 0001-2815
AB We have developed a rapid and simple method to **detect** the relation between HLA-DQ-beta 57 Asp and Chinese IDDM patients. The method involved the selective **amplification** of a DNA fragment from the HLA-DQ BI gene by using the mutagenic primers. After PCR, if the HLA-DQ-beta 57 was Asp, then there was an artificially created restriction enzyme cutting site. We then can accurately obtain the results by enzyme digestion and electrophoresis. Sixty-nine IDDM patients and 30 nondiabetic control subjects were analyzed using this method. Twenty-two (42%) IDDM patients had non-Asp 57 homozygous, 31 /450/o) were Asp/nonAsp 57 heterozygous, and 9 (13%) had Asp-57 homozygous. Of the 30 control subjects, the number of cases for these three types were 6 (20%), 18 (60%), and 6 (20%), respectively. The relative risk of homozygous DQ beta 57 non-Asp in our group was 2.9 and the p value was greater than 0.05. Using this kind of approach, we were able to provide a simple, rapid, and non-radioactive method to **detect** whether the HLA DQ-beta 57 was Asp or not.

L21 ANSWER 2 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 94:505618 BIOSIS
DN 97518618
TI Increased evening activation of the hypothalamic-pituitary-adrenal axis in depressed patients.
AU **Young E A**; Haskett R F; Grunhaus L; Pande A; Weinberg V M; Watson S J; Akil H
CS Mental Health Res. Unit, 205 Zina Pitcher Pl, Ann Arbor, MI 48109, USA
SO Archives of General Psychiatry 51 (9). 1994. 701-707. ISSN: 0003-990X
AB Objective: To **determine** whether depressed patients demonstrate hypothalamic-pituitary-adrenal (HPA) axis activation during the late afternoon and evening, a time when the HPA axis is usually quiescent in normal subjects. Methods: We administered metyrapone, an 11-beta-hydroxylase inhibitor of cortisol synthesis, to normal controls and depressed patients between 4 and 10 PM. Metyrapone blockade of cortisol secretion would **amplify** any HPA axis secretion. Results: In 10 normal control subjects, administration of metyrapone lowered plasma cortisol levels to a mean of 36 nmol/L. No rebound corticotropin or beta-endorphin secretion was seen in these normal controls between 4 and 10 PM, supporting the existence of a period of minimal endogenous corticotropin releasing factor drive. Compared with a group of placebo-treated depressed patients (n = 10), metyrapone-treated depressed subjects (n = 17) had significantly decreased plasma cortisol concentrations. However, in contrast to normal controls treated with metyrapone, metyrapone-treated depressed patients demonstrated rebound corticotroph secretion, particularly between 7:30 and 10 PM (P = .036 for patients vs normal controls for beta-endorphin secretion from 4:30 to 10 PM.) Conclusion: These data support the hypothesis of

increased corticotropin releasing factor drive in the evening in depressed subjects and are in agreement with the longstanding observation of "early escape" from dexamethasone suppression between 4 and 11 PM in depressed patients.

L21 ANSWER 3 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 94:263696 BIOSIS
DN 97276696
TI Complete androgen insensitivity due to a splice-site mutation in the androgen receptor gene and genetic screening with single-stranded conformation polymorphism.
AU **Young E L**; Cha K L; Yang M; Roy A; Ratnam S
CS Dep. Obstet. Gynecol., Natl. Univ. Hosp., Lower Kent Ridge Road, Singapore 0511, SIN
SO Fertility and Sterility 61 (5). 1994. 856-862. ISSN: 0015-0282
AB Objective: To characterize the genetic defect in a family with complete androgen insensitivity syndrome and to **determine** whether single-stranded conformation polymorphism (SSCP) can be used to **detect** subtle mutations in the androgen receptor (AR) gene. Design: **Amplification**, subcloning where appropriate, and sequencing of the AR gene in members of the affected family and to use SSCP to differentiate rapidly mutant from normal alleles. Setting: Reproductive endocrinology clinic and laboratory in a university hospital. Patients: A family of which two sisters (46 XY) have complete androgen insensitivity syndrome. Results: A novel single base (G fwdarw A) mutation in the exon G-intron 7 junction of the AR gene caused an abnormal donor splice site leading to complete androgen insensitivity in both affected siblings. Their mother was demonstrated to be the heterozygous carrier of this mutation while the other two males in the family carried the normal allele. Single-stranded conformation polymorphism proved useful for defining the normal, mutant, and heterozygous carrier status of each member of this family. Conclusions: This new mutation of the human AR gene illustrates the importance of exon G in receptor function. Single-stranded conformation polymorphism is a simple and rapid screening technique that can be used to **detect** unknown subtle mutations in the AR gene.

L21 ANSWER 4 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 94:258346 BIOSIS
DN 97271346
TI Single-tube, noninterrupted reverse transcription-PCR for **detection** of infectious bursal disease virus.
AU **Lee L H**; Ting L J; Shien J H; Shieh H K
CS Dep. Vet. Med., National Chung Hsing Univ., Taichung 403, TAI
SO Journal of Clinical Microbiology 32 (5). 1994. 1268-1272. ISSN: 0095-1137
AB An assay protocol based on single-tube, noninterrupted reverse transcription-PCR (RT-PCR) for the **detection** of infectious bursal disease virus (IBDV) is described. After the conditions for RT-PCR had been optimized, a primer set framing a region within the gene coding for IBDV VP2 protein was used to **amplify** a 318-bp fragment of the IBDV genome. **Amplified** product was

detected with three strains of IBDV, whereas none was obtained from uninfected bursal tissue or seven unrelated avian viruses. The sensitivity of this RT-PCR was tested with purified viral RNA from three strains of IBDV. The **detection** limit was 10 fg in an ethidium bromide-stained gel. In addition, this assay system was used to **detect** IBDV in bursal-tissue specimens from commercially reared chickens. The identity of the **amplified** products from the tissue specimen preparation was **determined** by using a rapid, simple procedure in which internally nested, end-labeled probes were used.

L21 ANSWER 5 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 93:478112 BIOSIS
DN BA96:111712
TI ALLELIC DISCRIMINATION BY NICK-TRANSLATION PCR WITH FLUOROGENIC PROBES.
AU **LEE L G; CONNELL C R**; BLOCH W
CS BIOMETRIC IMAGING, 1025 TERR BELLA AVE., MOUNTIN VIEW, CA 94043, USA.
SO NUCLEIC ACIDS RES 21 (16). 1993. 3761-3766. CODEN: NARHAD ISSN: 0305-1048
AB Nick-translation PCR was performed with fluorogenic probes. Two probes were used: one complementary to a sequence containing the F508 codon of the normal human cystic fibrosis (CF) gene (wt DNA) and one complementary to a sequence containing the .DELTA.F508 three base pair deletion (mut DNA). Each probe contained a unique and spectrally resolvable fluorescent indicator dye at the 5' end and a common quencher dye attached to the seventh nucleotide from the 5' end. The F508/.DELTA.F508 site was located between the indicator and quencher. The probes were added at the start of a PCR containing mut DNA, wt DNA or heterozygous DNA and were degraded during thermal cycling. Although both probes were degraded, each probe generated fluorescence from its indicator dye only when the sequence between the indicator and quencher dyes was perfectly complementary to target. The identity of the target DNA could be determined from the post-PCR fluorescence emission spectrum.

L21 ANSWER 6 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 93:321567 BIOSIS
DN BA96:29917
TI **DETECTION** OF HIV-1 DNA AND MESSENGER RNA IN INDIVIDUAL CELLS BY PCR-DRIVEN IN-SITU HYBRIDIZATION AND FLOW CYTOMETRY.
AU PATTERSON B K; TILL M; OTTO P; GOOLSBY C; FURTADO M R; **MCBRIDE L J**; WOLINSKY S M
CS DEP. MED., NORTHWEST. UNIV. MED. SCH., CHICAGO, IL 60611, USA.
SO SCIENCE (WASH D C) 260 (5110). 1993. 976-979. CODEN: SCIEAS ISSN: 0036-8075
AB Human immunodeficiency virus type-1 (HIV-1) DNA and messenger RNA sequences in both cell lines and blood obtained directly from HIV-1-infected patients were **amplified** by polymerase chain reaction and hybridized to fluorescein-labeled probes in situ, and the individually labeled cells were analyzed by flow cytometry. After flow cytometric analysis, heterogeneous cell populations were reproducibly resolved into HIV-1-positive and -negative

distributions. Fluorescence microscopy showed that the cellular morphology was preserved and intracellular localization of **amplified** product DNA was maintained. Retention of nonspecific probe was not observed. Analysis of proviral DNA and viral messenger RNA in cells in the blood of HIV-1-infected patients showed that the HIV-1 genome persists in a large reservoir of latently infected cells. With the use of this technique it is now possible to **detect** single-copy DNA or low-abundance messenger RNA rapidly and reproducibly in a minor subpopulation of cells in suspension at single-cell resolution and to sort those cells for further characterization.

L21 ANSWER 7 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 93:96521 BIOSIS
DN BA95:51717
TI **DETECTION** OF INFECTIOUS BURSAL DISEASE VIRUS INFECTION USING THE POLYMERASE CHAIN REACTION.
AU **LEE L H**; YU S L; SHIEH H K
CS DEP. VET. MED., NATL. CHUNG HSING UNIV., TAICHUNG, TAIWAN 40227.
SO J VIROL METHODS 40 (3). 1992. 243-253. CODEN: JVMEDH ISSN: 0166-0934
AB The method of reverse transcription (RT) followed by the polymerase chain reaction (PCR) was used to **amplify** two different fragments of the infectious bursal disease virus (IBDV) genomes. Two sets of primer framed two different regions within the genes coding for proteins VP2 and VP3, respectively. Both sequences were **detected** in five strains of IBDV, whereas, none were obtained from uninfected control cells. The sensitivity of RT-PCR was carried out on nucleic acids from the IBDV infected-cell cultures. The **detection** limit was 100 to 10-1 TCID50 in ethidium bromide stained gels and could be enhanced further to 10-1 to 10-3 TCID50 by hybridization after southern transfer. In addition, deletion of IBDV infection 12 out of 14 [chicken] bursal specimens examined by this technique was shown to be entirely consistent with the clinical history and an alternative diagnostic method. The speed, sensitivity, and specificity of this method, is relevant for the diagnosis of infection with IBDV.

L21 ANSWER 8 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 93:51164 BIOSIS
DN BA95:27466
TI RAPID DIAGNOSIS OF BETA-THALASSEMIA MUTATIONS IN CHINESE BY NATURALLY AND **AMPLIFIED** CREATED RESTRICTION SITES.
AU CHANG J-G; CHEN P-H; CHIOU S-S; **LEE L-S**; PERNG L-I; LIU T-C
CS DEP. MOL. MED. AND CLIN. PATHOL., TAIPEI MUNICIPAL JEN-AI HOSP. 10, SECT. 4, JEN-AI RD., TAIPEI, TAIWAN.
SO BLOOD 80 (8). 1992. 2092-2096. CODEN: BLOOAW ISSN: 0006-4971
AB We developed a rapid and simple method to diagnose the molecular defects of .beta.-thalassemia in Chinese patients. This method involves the selective **amplification** of a DNA fragment from human .beta. globin gene with specific oligonucleotide primers, followed by digestion with restriction enzymes that recognize artificially created or naturally occurring restriction sites. To **detect** the 4-nucleotide deletion of codon 41-42, we

introduced a single mismatch nucleotide into the 3' end of the upstream primer to create an artificial Taq I restriction site. With a similar approach, an artificial Rsa I site was generated to **detect** the nucleotide 654 mutation (C .fwdarw. T) of IVS-2, an Alu I restriction site was created to **detect** the codon 17 mutation (A .fwdarw. T), and EcoRI restriction site was created for the -28 mutation (A .fwdarw. G), a Rsa I restriction site was created for the nucleotide 5 mutation (G .fwdarw. C) of IVS-1, and a Spe I restriction site was created to distinguished the codon 71 (+T) and codon 71/72 (+A) mutations from a normal sequence. The other eight rare mutations that occur in the genes of the Chinese people naturally create or abolish restriction sites. Using this kind of approach, we are able to provide a simple, rapid, accurate, and nonradioactive method to **detect** the genetic defects of .beta.-thalassemia in the Chinese population. It should be used not only for routine screening but also for prenatal diagnosis.

L21 ANSWER 9 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 92:411649 BIOSIS
DN BA94:74849
TI CHARACTERIZATION OF NONRADIOACTIVE HYBRIDIZATION PROBES FOR **DETECTING** INFECTIOUS BURSAL DISEASE VIRUS.
AU **LEE L H**
CS DEP. VETERINARY MED., NATL. CHUNG HSING UNIVERSITY, TAICHUNG, TAIWAN 40227.
SO J VIROL METHODS 38 (1). 1992. 81-92. CODEN: JVMEDH ISSN: 0166-0934
AB Reverse transcription followed by the polymerase chain reaction was used to **amplify** a fragment of infectious bursal disease virus (IBDV) strain P3009 genome. The **amplified** DNA fragment was annealed into the plasmid pUC18 and used to transform Escherichia coli strain JM109. A clone that contained IBDV-specific nucleotide sequences was selected and designated pC23. The DNA fragment within pC23 was 320 base pairs in length and designated C23. Radiolabeled probes prepared from C23 hybridized to genome segment A of strain P3009 by a northern-blot hybridization assay. Biotin-labeled probes prepared from C23 and pC23 either by using nick translation (designated C23/NT and pC23/NT, respectively) or by direct introduction of biotin molecules into C23 and pC32 (designated C23/BH and pC23/BH, respectively) were used in the dot blot hybridization assay for **detecting** IBDV strains. All four biotinylated probes **detected** three serotype 1 viruses and one serotype 2 IBDV. However, they did not cross-react with nucleic acids extracted from mock-infected cells or from seven unrelated avian viruses. Probe pC23/BH **detected** as little as 0.04 ng of IBDV RNA, while the other three probes were less sensitive and **detected** approximately 1 ng of IBDV RNA. In addition, the probe pC23/BH **detected** IBDV RNA in bursa tissues from commercial broiler raising farms following the dot blot hybridization.

L21 ANSWER 10 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 92:389671 BIOSIS
DN BA94:61846

TI DNA SEQUENCING WITH DYE-LABELED TERMINATORS AND T7 DNA POLYMERASE EFFECT OF DYES AND DNTPS ON INCORPORATION OF DYE-TERMINATORS AND PROBABILITY ANALYSIS OF TERMINATION FRAGMENTS.
AU **LEE L G; CONNELL C R**; WOO S L; CHENG R D; MCARDLE B F; FULLER C W; HALLORAN N D; WILSON R K
CS APPLIED BIOSYSTEMS INC., 850 LINCOLN CENTRE DR., FOSTER CITY, CALIF. 94404.
SO NUCLEIC ACIDS RES 20 (10). 1992. 2471-2483. CODEN: NARHAD ISSN: 0305-1048
AB The incorporation of fluorescently labeled dideoxynucleotides by T7 DNA polymerase is optimized by the use of Mn2+, fluorescein analogs and four 2'-deoxyribonucleoside 5'-O-(1-thiotriphosphates) (dNTP.alpha.S's). The one-tube extension protocol was tested on single-stranded templates, as well as PCR fragments which were made single-stranded by digestion with T7 gene 6 exonuclease. Dye primer sequencing using four dNTP.alpha.S's was shown to give uniform termination patterns which were comparable to four dNTPs. Efficiency of the polymerase also appeared to improve with the dNTP.alpha.S's. A mathematical model was developed to predict the pattern of termination based on enzyme activity and ratios of ddNTP/dNTPs. This method can be used to optimize sequencing reactions and to estimate enzyme discrimination constants of chain terminators.

L21 ANSWER 11 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 90:331544 BIOSIS
DN BA90:39563
TI **DETECTION** OF BETA GLOBIN GENE FROM SINGLE HAIRS.
AU LIU T-C; CHANG J-G; LIN C-P; **LEE L-S**; LIN S-F; LIU H-W; CHEN T-P
CS DEP. INTERN. MED., KAOHSIUNG MED. COLL., KAOHSIUNG CITY 80708.
SO KAOHSIUNG J MED SCI 6 (4). 1990. 181-186. CODEN: KHHCE2 ISSN: 0257-5655
AB DNA can be extracted from hair shafts and hair roots. The content of DNA in hairs is usually limited: the root end of hairs may contain 0.5 .mu.g DNA and shed hairs contain less than 10 ng DNA. DNA analysis with restriction fragment length polymorphism (RFLP) requires microgram amounts of DNA. Such DNA cannot be obtained from such samples as single hairs or blood stains. Even with a little amount of DNA, specific genes of DNA can be greatly **amplified** to more than 106-fold in vitro by polymerase chain reaction (PCR). We extracted the DNA from a half, 1, and 2 hair roots and 4 hair shafts and **amplified** the DNA with primer pairs (5'-GCACCATTCT-AAAGAATAAC-3', 5'-GGATTGTAGCTGCTATTAGC-3') of the .beta.-globin gene, covering part sequences of the IVS-2 region by using the polymerase chain reaction for 50 cycles. The electrophoresis of the PCR product revealed a 131 base pairs band. Finally, we hybridized the PCR product with an IVS-2 probe (5'-GGGTTAAGGCAATAGCAAT-3'). A fragment of the IVS-2 extending from nucleotide 612 to 742 of the .beta.-globin gene can be demonstrated in the slot blot filter of hair roots and hair shafts, but not in the 1 .mu.g of blood which was not **amplified** by PCR. **Detection** of the .beta.-globin gene from single hairs by using the PCR may be useful for the diagnosis of thalassemia from

single hairs.

L21 ANSWER 12 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 89:244621 BIOSIS
DN BA87:125686
TI IDENTIFICATION OF MUTATIONS LEADING TO THE LESCH-NYHAN SYNDROME BY AUTOMATED DIRECT DNA SEQUENCING OF IN-VITRO **AMPLIFIED** COMPLEMENTARY DNA.
AU GIBBS R A; NGUYEN P-N; **MCBRIDE L J**; KOEPF S M; CASKEY C T
CS BAYLOR COLL. MED., ONE BAYLOR PLAZA, HOUSTON, TEXAS 77030.
SO PROC NATL ACAD SCI U S A 86 (6). 1989. 1919-1923. CODEN: PNASA6
ISSN: 0027-8424
AB The Lesch-Nyhan (LN) syndrome is a severe X chromosome-linked disease that results from a deficiency of the purine salvage enzyme hypoxanthine phosphoribosyltransferase (HPRT). The mutations leading to the disease are heterogeneous and frequently arise as de novo events. We have identified nucleotide alterations in 15 independently arising HPRT-deficiency cases by direct DNA sequencing of in vitro **amplified** HPRT cDNA. We also demonstrate that the direct DNA sequence analysis can be automated, further simplifying the **detection** of new mutations at this locus. The mutations include DNA base substitutions, small DNA deletions, a single DNA base insertion, and errors in RNA splicing. The application of these procedures allows DNA diagnosis and carrier identification by the direct **detection** of the mtuant alleles within individual families affected by LN.

L21 ANSWER 13 OF 13 BIOSIS COPYRIGHT 1995 BIOSIS
AN 81:212151 BIOSIS
DN BA71:82143
TI EFFECTS OF NOCODAZOLE ON STRUCTURES OF CALF BRAIN TUBULIN.
AU LEE J C; FIELD D J; **LEE L L Y**
CS E. A. DOISY DEP. BIOCHEM., ST. LOUIS UNIV., ST. LOUIS MISSOURI 63104.
SO BIOCHEMISTRY 19 (26). 1980 (RECD. 1981). 6209-6215. CODEN: BICHAW
ISSN: 0006-2960
AB Nocodazole is a potentially useful drug with specificity directed toward malignant cells. The interaction of the antimitotic nocodazole (methyl [5-(2-thienylcarbonyl)-1H-benzimidazol-2-yl]carbamate) with calf brain tubulin was studied to **determine** the effect of such interaction on the structure of tubulin. The effect of nocodazole on the self-association of tubulin was monitored by turbidity measurements and velocity sedimentation. Sedimentation patterns indicate that nocodazole did not induce tubulin to undergo self-association to form higher orders of aggregate or perturb the equilibrium of the reaction leading to the formation of 42S double-ring structures although nocodazole binds to both the tubulin dimers and the polymeric form. Nocodazole inhibits the in vitro reconstitution of microtubules, and the presence of microtubule-associated proteins does not **amplify** the inhibitory effect of the drug. The conformational changes in tubulin upon binding of nocodazole were monitored by differential spectroscopy, circular dichroism, fluorescence, and chemical modification of sulfhydryl residues. The sulfhydryl residues become

more accessible to chemical modification. The binding of nocodazole does not significantly alter the new environment of tryptophan chromophores. These residues are apparently not all located on the surface of the tubulin molecule and at least some are partially buried.

-key terms

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         17773 REAL
        513727 TIME
          6466 REAL(W)TIME
         33237 AMPLIF?
L22         45 REAL(W)TIME AND AMPLIF?

=> s l22 and (fluoresc? or (fiber or fibre)(l)optic?)
        120316 FLUORESC?
         59097 FIBER
          8379 FIBRE
         52378 OPTIC?
          4084 (FIBER OR FIBRE)(L)OPTIC?
L23          2 L22 AND (FLUORESC? OR (FIBER OR FIBRE)(L)OPTIC?)

=> s l23 not l21; s l22 not (l23 or l21)
L24          2 L23 NOT L21


L25         43 L22 NOT (L23 OR L21)

=> d l24 1-2 .beverly1; d l25 1-43 .bev1; fil hom

L24  ANSWER 1 OF 2  BIOSIS  COPYRIGHT 1995 BIOSIS
AN   93:529345  BIOSIS
DN   BA96:142752
TI   REAL TIME MICRO-FIBEROPTIC MONITORING OF
     ENDOGENOUS FLUORESCENCE IN THE RAT CONCEPTUS DURING
     HYPOXIA.
AU   THORSRUD B A; HARRIS C
CS   TOXICOL. PROGRAM, DEP. ENVIRON. INDUSTRIAL HEALTH, 1420 WASHINGTON
     HEIGHTS, UNIV. MICH., ANN ARBOR, MI 48109-2029, USA.
SO   TERATOLOGY 48 (4). 1993.  343-353. CODEN: TJADAB ISSN: 0040-3709
AB   A micro-fiberoptic methodology has been developed for noninvasive,
     real time measurement of endogenous pyridine
     nucleotide fluorescence from the surface of the visceral
     yolk sac (VYS) in intact, viable rat conceptuses. Gestational day
     (GD) 10-12 conceptuses are maintained in a customized perifusion
     system, which allows for control of oxygenation, as well as the
     continuous measurement of pH and oxygen concentration in the effluent
     perifusate. Miniaturized light guides were constructed by drawing
     250 .mu.m ESKA acrylic optical fibers through a stainless
     steel sheath with a high strength epoxy polymer. A single
     fiber supplied the excitation signal from a mercury arc lamp
     at a wavelength of 366 nm. The emission signal was returned via three
     additional fibers, electronically amplified, processed, and
     recorded, using a dual channel lamp-compensated fluorometer,
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optimized for detection of reduced pyridine nucleotides at 455 nm. Endogenous **fluorescence** in the conceptus was monitored by placing the polished tip of the sensor directly on the surface of the VYS. Oxygen-equilibrated conceptuses, exposed to 100% nitrogen, produced a reproducible biphasic surface **fluorescence** peak, which returned to baseline levels upon reoxygenation of the perifusate. This biphasic response consisted of an initial rapid rise in **fluorescence** (phase I), followed by an attenuated rate in **fluorescence** signal increase (phase II). The hypoxia produced age-dependent rates of **fluorescence** change during phase I, while phase II remained relatively unchanged throughout GD 10-12. These results demonstrate the ability to monitor endogenous **fluorescence**, non-invasively and in **real time**, during the period of organogenesis in the intact rat conceptus and will provide valuable information in studies of embryonic metabolism and response to chemical embryotoxicants.

L24 ANSWER 2 OF 2 BIOSIS COPYRIGHT 1995 BIOSIS
AN 93:428618 BIOSIS
DN BA96:83243
TI DNA TYPING WITH **FLUORESCENTLY** TAGGED SHORT TANDEM REPEATS A SENSITIVE AND ACCURATE APPROACH TO HUMAN IDENTIFICATION.
AU FREGEAU C J; FOURNEY R M
CS ROYAL CANADIAN MOUNTED POLICE, CENTRAL FORENSIC LAB., BIOLOGY RES. DEV. SUPPORT UNIT, 1200 VANIER PARKWAY, OTTAWA, ON K1G 3M8, CAN.
SO BIOTECHNIQUES 15 (1). 1993. 100-110, 112-119. CODEN: BTNQDO ISSN: 0736-6205
AB Human identification through DNA analysis has faced tremendous changes in the past seven years. The advent of the polymerase chain reaction (PCR) technology-coupled with the discovery and **amplifiable** minisatellites and microsatellites known as **amplified** fragment length polymorphisms and short tandem repeats (STRs), respectively, allow allelic profiles to be obtained with minute amounts of target DNA even in a degraded state. Very recently, a new dimension in DNA typing analysis was opened with the development of instruments for automated **real-time** analysis of **fluorescent amplification** products.
In order to derive an automated approach to DNA typing. STR systems were evaluated for sensitivity and accuracy using the Gene Scanner and compared to other DNA typing methods currently in use. Eight different STR systems (encompassing tri-, tetra- and pentanucleotide repeats) were investigated, and conditions for their **amplification** with **fluorescence**-tagged primers, resolution on polyacrylamide gels and analysis on a **fluorescent** DNA fragment analyzer were optimized. Using these conditions, discrete allelic profiles were obtained following **amplification** of DNA extracted from various cell lines, liquid blood, dry bloodstains and hair samples. **Amplification** from serial dilutions of template DNA indicated that the minimal amount of target DNA required to detect a **fluorescent** signal on the Gene Scanner for any of the eight STR systems examined is approximately 100 picograms. The level of precision obtained from **real-time** allele size determination was observed to

be .+-. 0.2 to 0.5 base pair (intragel) and .+-. 0.5 to 1.5 base pairs (intergel). Consequently, PCR-based DNA typing with **fluorescent** STR primers and automated analysis provides the enhanced level of precision, accuracy and sensitivity required for forsenic case-work analysis. Moreover, this approach offers significant advantages for the routine processing of large numbers of DNA samples, greatly facilitates and expedites the generation of allelic profile databases and enables investigators to perform the simultaneous survey of several different loci from single individuals and/or forensic samples.

L25 ANSWER 1 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 95:297022 BIOSIS
DN 98311322
TI The motogenic and mitogenic responses to HGF are **amplified** by the Shc adaptor protein.
AU Pelicci G; Giordano S; Zhen Z; Salcini A E; Lanfrancone L; Bardelli A; Panayotou G; Waterfield M D; Ponzetti C; Pelicci P G; Comoglio P M
CS Dep. Biomed. Sci. Oncol., Univ. Torino Med. Sch., Torino, Italy
SO Oncogene 10 (8). 1995. 1631-1638. ISSN: 0950-9232

L25 ANSWER 2 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 94:274924 BIOSIS
DN 97287924
TI **Real-time** sleep-wake scoring in the rat using a single EEG channel.
AU Karasinski P; Stinus L; Robert C; Limoge A
CS Lab. Electrophysiol., Univ. Rene Descartes Paris V, 1 rue Maurice Arnoux, 92120 Montrouge, FRA
SO Sleep (Rochester) 17 (2). 1994. 113-119. ISSN: 0161-8105

L25 ANSWER 3 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 94:206760 BIOSIS
DN 97219760
TI Effect of rate and coupling interval on endocardial R wave amplitude variability in permanent ventricular sensing lead systems.
AU Callans D J; Hook B G; Marchlinski F E
CS Philadelphia Heart Inst., 39th Market St., Philadelphia, PA 19104, USA
SO Journal of the American College of Cardiology 22 (3). 1993. 746-750. ISSN: 0735-1097

L25 ANSWER 4 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 94:38489 BIOSIS
DN 97051489
TI Establishment of a quality assurance program for human immunodeficiency virus type 1 DNA polymerase chain reaction assays by the AIDS clinical trials group.
AU Jackson J B; Drew J; Lin H J; Otto P; Bremer J W; Hollinger F B; Wolinsky S M; Actg Pcr Work Group; Actg Pcr Virol Lab
CS Inst. Pathol., Case Western Reserve Univ., Cleveland, OH 44106, USA

SO Journal of Clinical Microbiology 31 (12). 1993. 3123-3128. ISSN: 0095-1137

L25 ANSWER 5 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 93:473652 BIOSIS
DN BA96:107252
TI COMPENSATION FOR THE SIGNAL PROCESSING CHARACTERISTICS OF ULTRASOUND B-MODE SCANNERS IN ADAPTIVE SPECKLE REDUCTION.
AU CRAWFORD D C; BELL D S; BAMBER J C
CS INST. CANCER RES., ROYAL MARSDEN HOSP., DOWNS RD., SUTTON, SM2 5PT, UK.
SO ULTRASOUND MED BIOL 19 (6). 1993. 469-485. CODEN: USMBA3

L25 ANSWER 6 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 93:372742 BIOSIS
DN BA96:58417
TI COATED SURFACE ACOUSTIC WAVE SENSOR EMPLOYING A REVERSIBLE MASS-**AMPLIFYING** LIGAND SUBSTITUTION REACTION FOR **REAL-TIME** MEASUREMENT OF 1 3 BUTADIENE AT LOW AND SUB-PPM CONCENTRATIONS.
AU ZHANG G-Z; ZELLERS E T
CS DEP. ENVIRONMENTAL INDUSTRIAL HEALTH, SCH. PUBLIC HEALTH, UNIV. MICHIGAN, 1420 WASHINGTON HEIGHTS, ANN ARBOR, MI 48109-2029, USA.
SO ANAL CHEM 65 (10). 1993. 1340-1349. CODEN: ANCHAM ISSN: 0003-2700

L25 ANSWER 7 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 93:271828 BIOSIS
DN BA96:2053
TI MEASUREMENT OF HIV VIRUS LOAD AND GENOTYPIC RESISTANCE BY GENE **AMPLIFICATION** IN ASYMPTOMATIC SUBJECTS TREATED WITH COMBINATION THERAPY.
AU HOLODNIY M; KATZENSTEIN D; WINTERS M; MONTOYA J; SHAFER R; KOZAL M; RAGNI M; ERIGAN T C
CS INFECTIOUS DISEASES, VETERANS AFFAIRS MEDICAL CENTER, PALO ALTO, CA 94304, USA.
SO J ACQUIRED IMMUNE DEFIC SYNDR 6 (4). 1993. 366-369. CODEN: JAISET ISSN: 0894-9255

L25 ANSWER 8 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 93:1467 BIOSIS
DN BA95:1467
TI A SYSTEM FOR IN-VITRO CHARACTERIZATION OF HEART VALVE BIOPROSTHESES UNDER ACCELERATED FATIGUE CONDITIONS AND UNDER PHYSIOLOGIC CONDITIONS.
AU IOSIF M C; GABBAY S
CS UNIV. MED. DENTISTRY NEW JERSEY, DEP. CARDIOTHORACIC SURGERY, ROOM G-502, 185 SOUTH ORANGE AVE., NEWARK, N.J. 07103-2757.
SO BIOMED INSTRUM TECHNOL 26 (5). 1992. 408-413. CODEN: BITYE2

L25 ANSWER 9 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 92:33666 BIOSIS
DN BA93:22941
TI ANALOG-TO-DIGITAL CLINICAL DATA COLLECTION ON NETWORKED WORKSTATIONS

WITH GRAPHIC USER INTERFACE.
AU LUNT D
CS NATIONAL JEWISH CENTER IMMUNOLOGY RESPIRATORY MEDICINE, 1400 JACKSON ST., DENVER, COLO. 80206.
SO J MED SYST 15 (1). 1991. 21-36. CODEN: JMSYDA

L25 ANSWER 10 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 91:521865 BIOSIS
DN BA92:133325
TI MONITORING OF THE FIBER DELIVERY SYSTEM BY A DIRECTIONAL COUPLER IN CARDIOVASCULAR APPLICATIONS.
AU SOTTINI S; LOMBARDO S; RUSSO V
CS I.R.O.E.-C.N.R., VIA PANCIATICHI 64, FIRENZE, ITALY.
SO LASERS MED SCI 6 (3). 1991. 261-268. CODEN: LMSCEZ

L25 ANSWER 11 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 91:460354 BIOSIS
DN BA92:105134
TI MEASUREMENT OF VOLATILE ORGANICS AT PART PER BILLION CONCENTRATIONS USING A COLD TRAP INLET AND HIGH SPEED GAS CHROMATOGRAPHY.
AU MOURADIAN R F; LEVINE S P; KE H-Q; ALVORD H H
CS NATIONAL INST. OCCUPATIONAL SAFETY HEALTH, MAIL STOP R-14, 4676 COLUMBIA PARKWAY, CINCINNATI, OHIO 45226.
SO J AIR WASTE MANAGE ASSOC 41 (8). 1991. 1067-1072. CODEN: JAWAEB ISSN: 1047-3289

L25 ANSWER 12 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 91:274692 BIOSIS
DN BA92:7307
TI SOFTWARE FILTER FOR DETECTING SPIKES SUPERIMPOSED ON A FLUCTUATING BASELINE.
AU MARION-POLL F; TOBIN T R
CS INRA-CNRS LAB. NEUROBIOL. COMPAREE DES INVERTEBRES, BP 23, 91440 BURES-SUR-YVETTE, FR.
SO J NEUROSCI METHODS 37 (1). 1991. 1-6. CODEN: JNMEDT ISSN: 0165-0270

L25 ANSWER 13 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 91:45216 BIOSIS
DN BA91:23497
TI THERMAL LENS-CIRCULAR DICHROISM DETECTOR FOR HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY.
AU XU M; TRAN C D
CS DEP. CHEMISTRY, MARQUETTE UNIV., MILWAUKEE, WIS. 53233.
SO ANAL CHEM 62 (22). 1990. 2467-2471. CODEN: ANCHAM ISSN: 0003-2700

L25 ANSWER 14 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 90:491133 BIOSIS
DN BA90:119479
TI DESIGN OF A MEASUREMENT SYSTEM FOR ELECTROPHYSIOLOGICAL CARDIAC SURGERY.
AU ASHTON N G; WITHY S J; BURKE N J
CS DEP. CLIN. PHYSIOL. BIOMED. ENG., GREEN LANE HOSP., AUCKLAND.
SO AUSTRALAS PHYS ENG SCI MED 13 (2). 1990. 59-62. CODEN: AUPMDI ISSN:

0158-9938

L25 ANSWER 15 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 90:104069 BIOSIS
DN BR38:49354
TI **REAL-TIME** SEQUENCE **AMPLIFICATION** AND GENE REARRANGEMENT WITHIN NEMATODE MITOCHONDRIAL DNA.
AU BECK J L; HYMAN B C
CS DEP. BIOL., UNIV. CALIF., RIVERSIDE, CALIF. 92521.
SO TWENTY-EIGHTH ANNUAL MEETING OF THE SOCIETY OF NEMATOLOGISTS, DAVIS, CALIFORNIA, USA, AUGUST 13-17, 1989. J NEMATOL 21 (4). 1989. 551. CODEN: JONEB5 ISSN: 0022-300X

L25 ANSWER 16 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 90:86513 BIOSIS
DN BA89:45864
TI A COMPUTERIZED SYSTEM FOR CLINICAL INVESTIGATIONS IN CARDIAC ELECTROPHYSIOLOGY.
AU IMPERIALE C
CS VIA POTENZA 18, 73100 LECCE, ITALY.
SO J CLIN ENG 14 (6). 1989. 493-503. CODEN: JCEND7

L25 ANSWER 17 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 89:476726 BIOSIS
DN BA88:112486
TI EXPERIMENTAL DATA ACQUISITION AND MANIPULATION BY MICROCOMPUTER.
AU SMITH T C; MENG R L
CS 1875 DEMPSTER AVE., SUITE 580, PARK RIDGE, IL 60068, USA.
SO COMPUT METHODS PROGRAM BIOMED 29 (3). 1989. 153-160. CODEN: CMPBEK

L25 ANSWER 18 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 89:386735 BIOSIS
DN BA88:67325
TI DESIGN OF A DATA-ACQUISITION SYSTEM FOR MONITORING SLEEP ORGANIZATION IN PRETERM INFANTS.
AU DRAKULIC B S; GARBANATI J A; GOLD M N
CS ELECTRICAL ENG. DEP., UNIV. CALIFORNIA, LOS ANGELES, 6731B BOELTER HALL, LOS ANGELES, CALIF. 90024.
SO BIOMED INSTRUM TECHNOL 23 (1). 1989. 44-49. CODEN: BITYE2

L25 ANSWER 19 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 89:310160 BIOSIS
DN BA88:23890
TI **REAL-TIME** SIGNAL ACQUISITION AND ANALYSIS FOR CLINICAL DENTAL ELECTROMYOGRAPHY USING A MICROCOMPUTER-BASED SYSTEM.
AU YUEN S W H; MA R Y P; CHUNG Y C; HWANG J C C
CS DEP. CHILDREN'S DENT. ORTHODONTICS, PRINCE PHILIP DENTAL HOSP., 34 HOSPITAL ROAD, HONG KONG.
SO J ORAL REHABIL 16 (1). 1989. 49-56. CODEN: JORHBY ISSN: 0305-182X

L25 ANSWER 20 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 89:241121 BIOSIS
DN BA87:122186

TI COMPUTER ANALYSIS OF EEG EOG AND NPT ACTIVITY DURING SLEEP.
AU DOMAN J; KUPFER D J
CS WESTERN PSYCHIATRIC INST. AND CLIN., UNIV. PITTSBURGH SCH. MED., 3811 O'HARA ST., PITTSBURGH, PA. 15213, USA.
SO INT J BIO-MED COMPUT 23 (3-4). 1988. 191-200. CODEN: IJBCBT ISSN: 0020-7101

L25 ANSWER 21 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 88:436206 BIOSIS
DN BA86:88304
TI COMPARISON OF TWO LASER DOPPLER FLOWMETRY SYSTEMS FOR BONE BLOOD FLOW ANALYSIS.
AU SWIONTKOWSKI M F; SCHLEHR F; COLLINS J C; SANDERS R; POU A
CS DEP. ORTHOPAEDICS REHABILITATION, VANDERBILT UNIV., NASHVILLE, TENN. 37232, USA.
SO CALCIF TISSUE INT 43 (2). 1988. 103-107. CODEN: CTINDZ ISSN: 0171-967X

L25 ANSWER 22 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 88:356864 BIOSIS
DN BA86:52342
TI ANALOGUE COMPUTER SYSTEM FOR THE EVALUATION OF HIP JOINT MOMENTS DURING NORMAL WALKING.
AU GRIGORIADOU-KOUKIS M; SAMARAKOU M T
CS UNIV. ATHENS, ELECTRONICS LAB., PANEPISTIMIOUPOLI-KTIRIA TYPA, 157 71 ATHENS, GREECE.
SO J BIOMED ENG 10 (3). 1988. 253-260. CODEN: JBIEDR ISSN: 0141-5425

L25 ANSWER 23 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 87:235626 BIOSIS
DN BA83:123796
TI TRAFFIC-ALARM SOUND MONITOR FOR AURALLY HANDICAPPED DRIVERS.
AU MIYAZAKI S; ISHIDA A
CS DIV. ELECTRONIC ENGINEERING, INST. MED. AND DENTAL ENGINEERING, TOKYO MED. AND DENTAL UNIV., 2-3-10 KANDA-SURUGADAI, CHIYODA-KU, TOKYO 101, JAPAN.
SO MED BIOL ENG COMPUT 25 (1). 1987. 68-74. CODEN: MBECDY ISSN: 0140-0118

L25 ANSWER 24 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 87:63635 BIOSIS
DN BA83:31961
TI IMPROVED EAR DYE DENSITOMETER AND IT'S APPLICATION TO LIVER FUNCTION TEST WITH INDOCYANINE GREEN.
AU YOKOSUKA H
CS DEP. INTERN. MED., THE THIRD HOSP., THE JIKEI UNIV. SCH. MED.
SO TOKYO JIKEIKAI MED J 101 (4). 1986. 641-656. CODEN: TJIDAH ISSN: 0375-9172

L25 ANSWER 25 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 86:433712 BIOSIS
DN BA82:99900
TI TECHNIQUE WITH LOCK-IN **AMPLIFIER** FOR **REAL-**

TIME MEASUREMENT OF TRICUSPID VALVE ANNULUS AREA.
AU TAMIYA K; HIGASHIDATE M; KIKKAWA S
CS DEP. SURG. SCI., HEART INST. JAPAN, TOKYO WOMEN'S MED. COLL., 8-1 KAWADACHO, SHINJUKU TOKYO 162, JPN.
SO AM J PHYSIOL 251 (2 PART 2). 1986. H236-H241. CODEN: AJPHAP ISSN: 0002-9513

L25 ANSWER 26 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 86:232729 BIOSIS
DN BR30:115225
TI **REAL-TIME** ANALYSIS OF ZYMOSAN-DEPENDENT COMPLEMENT ACTIVATION-**AMPLIFICATION** KINETICS BASED ON STIMULATION OF NEUTROPHIL LEUKOCYTE CHEMILUMINESCENCE.
AU ALLEN R C
CS US ARMY INST. SURG. RES., FT. SAM HOUSTON, SAN ANTONIO, TEX. 78234-6200.
SO 70TH ANNUAL MEETING OF THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY, ST. LOUIS, MO., USA, APR. 13-18, 1986. FED PROC 45 (3). 1986. 246. CODEN: FEPRA7 ISSN: 0014-9446

L25 ANSWER 27 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 86:98625 BIOSIS
DN BA81:9041
TI DIGITAL SUBTRACTION ANGIOGRAPHY IN PATIENTS WITH CENTRAL VERTIGO.
AU INAMORI T; UMETANI Y; TAKAYASU Y; TARUOKA A
CS TAKARAZUKA CITY HOSPITAL.
SO PRACT OTOL KYOTO 78 (7). 1985. 1357-1369. CODEN: JIBIAG ISSN: 0368-2420

L25 ANSWER 28 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 85:385413 BIOSIS
DN BA80:55405
TI LOSS-FREE COUNTING IN GAMMA SPECTROSCOPY.
AU WESTPHAL G P
CS ATOMINST. OSTERREICHISCHEN UNIVERSITAETEN, A-1020 WIEN, AUSTRIA.
SO J TRACE MICROPROBE TECH 2 (3-4). 1984-1985. 217-236. CODEN: JTMTDE ISSN: 0733-4680

L25 ANSWER 29 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 85:338359 BIOSIS
DN BA80:8351
TI DESIGN OF A **REAL-TIME** FRENCH TEXT-TO-SPEECH SYSTEM.
AU O'SHAUGHNESSY D
CS INRS-TELECOMMUNICATIONS, BNR, 3 PLACE DU COMMERCE, NUNS' ISLAND, QUEBEC H3E 1H6 CANADA.
SO SPEECH COMMUN 3 (3). 1984 (RECD. 1985). 233-244. CODEN: SCOMDH

L25 ANSWER 30 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 85:331881 BIOSIS
DN BA80:1873
TI BRUXING PATTERNS IN MAN DURING SLEEP.
AU CLARKE N G; TOWNSEND G C; CAREY S E

CS DEP. DENTAL HEALTH, UNIV. ADELAIDE, ADELAIDE, SOUTH AUSTRALIA 5001.
SO J ORAL REHABIL 11 (2). 1984. 123-128. CODEN: JORHBY ISSN: 0305-182X

L25 ANSWER 31 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 85:295492 BIOSIS
DN BA79:75488
TI A TRANSDUCER FOR THE DIRECT MEASUREMENT OF RATES OF LETHALITY DURING THERMAL PROCESSING OF FOODS.
AU DAVID J R D; SHOEMAKER C F
CS DEPARTMENT OF BACTERIOLOGY, UNIV. OF CALIFORNIA, DAVIS, CA 95616.
SO J FOOD SCI 50 (1). 1985. 223-225. CODEN: JFDSAZ ISSN: 0022-1147

L25 ANSWER 32 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 85:286070 BIOSIS
DN BA79:66066
TI MISINTERPRETATION OF FETAL HEART RATE MONITORING IN CASE OF INTRAUTERINE DEATH.
AU ACHIRON R; ZAKUT H
CS DEP. OBSTET. GYNECOL., SACKLER FAC. MED., TEL-AVIV UNIV., EDITH WOLFSON HOSP., HOLON 58100, ISRAEL.
SO CLIN EXP OBSTET GYNECOL 11 (4). 1984 (RECD. 1985). 126-129. CODEN: CEGOAM

L25 ANSWER 33 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 84:328527 BIOSIS
DN BA78:65007
TI A MICRO PROCESSOR BASED TISSUE DISPLACEMENT MONITOR FOR IN-VITRO QUANTIFICATION OF KNEE CAPSULE DEFORMATION.
AU LOOFT F J; LYONS H D
CS DEP. ELECTRICAL ENG., WORCESTER POLYTECHNIC INST., WORCESTER, MASS. 01609, USA.
SO J NEUROSCI METHODS 10 (2). 1984. 125-138. CODEN: JNMEDT ISSN: 0165-0270

L25 ANSWER 34 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 84:326800 BIOSIS
DN BA78:63280
TI EYE MOVEMENTS IN A 2 DIMENSIONAL PLANE A METHOD FOR CALIBRATION AND ANALYSIS USING THE VERTICAL AND HORIZONTAL ELECTRO OCULOGRAM.
AU WOESTENBURG J C; VERBATEN M N; SLANGEN J L
CS DEP. PSYCHOPHYSIOL., VARKENMARKT 2, UNIV. UTRECHT, 3511 BZ UTRECHT, NETHERLANDS.
SO BIOL PSYCHOL 18 (2). 1984. 149-160. CODEN: BLPYAX ISSN: 0301-0511

L25 ANSWER 35 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 84:302362 BIOSIS
DN BA78:38842
TI ULTRASONIC ACOUSTIC EMISSIONS FROM THE SAPWOOD OF THUJA-OCCIDENTALIS MEASURED INSIDE A PRESSURE BOMB.
AU TYREE M T; DIXON M A; THOMPSON R G
CS DEPARTMENT OF BOTANY, UNIVERSITY OF TORONTO, TORONTO, CANADA M5S 1A1.
SO PLANT PHYSIOL (BETHESDA) 74 (4). 1984. 1046-1049. CODEN: PLPHAY ISSN: 0032-0889

L25 ANSWER 36 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 83:301384 BIOSIS
DN BA76:58876
TI DIGITAL FLUOROSCOPIC ANGIOGRAPHY IN THE DIAGNOSIS OF CENTRAL NERVOUS SYSTEM DISEASES.
AU TAKAHASHI M; BUSSAKA H; NONAKA N; MIURA G; HIRATA Y; MATSUKADO Y
CS DEP. RADIOL., KUMAMOTO UNIV., 1-1-1 HONJO, KUMAMOTO 860.
SO NEUROL MED-CHIR 23 (2). 1983. 116-122. CODEN: NMCHBN ISSN: 0470-8105

L25 ANSWER 37 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 81:166926 BIOSIS
DN BA71:36918
TI THE NORMAL CONDITION OF THE FETAL ELECTRO CARDIOGRAM DURING LABOR.
AU MARVELL C J; KIRK D L; JENKINS H M L; SYMONDS E M
CS DEP. OF ELECTRICAL AND ELECTRONIC ENGINEERING, UNIV. OF NOTTINGHAM UNIV. PARK, NOTTINGHAM, NG7 2RD.
SO BR J OBSTET GYNAECOL 87 (9). 1980. 786-796. CODEN: BJOGAS ISSN: 0306-5456

L25 ANSWER 38 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 81:137162 BIOSIS
DN BA71:7154
TI DYNAMIC SIMULATION A POSITIVE FEEDBACK MECHANISM FOR EXPERIMENTAL RESEARCH IN THE BIOLOGICAL SCIENCES.
AU MCKINION J M
CS CROP PRODUCTION SYSTEMS RES. BIOL. SYSTEMS , SCI. EDUC. ADM., USDA, MISS.
SO AGRIC SYST 5 (4). 1980. 239-250. CODEN: AGSYD5

L25 ANSWER 39 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 80:201489 BIOSIS
DN BA69:76485
TI A FLEXIBLE SIGNAL AVERAGING SYSTEM FOR CARDIAC WAVEFORMS.
AU VINCENT R; ENGLISH M J; MACKINTOSH A F; STROUD N; CHAMBERLAIN D A; WOOLLONS D J
CS GRAD. DIV. BIOMED. ENG., SUSSEX UNIV., SUSSEX, ENGL., UK.
SO J BIOMED ENG 2 (1). 1980. 15-24. CODEN: JBIEDR ISSN: 0141-5425

L25 ANSWER 40 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 80:177329 BIOSIS
DN BA69:52325
TI FEASIBILITY AND LIMITS OF QUANTITATIVE AND ANALYTIC MONITORING OF ELECTRO ENCEPHALOGRAMS.
AU WEBER B; LELOUP M; BAUDOUIN C; COUEGNAS J
CS DEP. ANEST. REANIM., HOP. LARIBOISERE, 2 RUE AMBROISE-PARE, 75475 PARIS CEDEX 10, FR.
SO AGRESSOLOGIE 20 (3). 1979. 183-192. CODEN: AGSOA6 ISSN: 0002-1148

L25 ANSWER 41 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 79:133850 BIOSIS
DN BA67:13850
TI DATA ACQUISITION SYSTEM FOR BODY SURFACE POTENTIAL MAPPING.

AU KO W H; BERGMANN B P; PLONSEY R
CS ENG. DESIGN CENT., CASE WEST. RESERVE UNIV., CLEVELAND, OHIO 44106, USA.
SO J BIOENG 2 (1-2). 1978 33-46. CODEN: JBNGDO ISSN: 0145-3068

L25 ANSWER 42 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 77:111918 BIOSIS
DN BA63:6782
TI **REAL TIME** OBSERVATION OF CARDIAC MOVEMENT AND STRUCTURES IN CONGENITAL AND ACQUIRED HEART DISEASES EMPLOYING HIGH SPEED ULTRASONO CARDIO TOMOGRAPHY.
AU NISHIMURA K; HIBI N; KATO T; FUKUI Y; ARAKAWA T; TATEMATSU H; MIWA A; TADA H; KAMBE T; ET AL.
SO AM HEART J 92 (3). 1976 340-350. CODEN: AHJOA2 ISSN: 0002-8703

L25 ANSWER 43 OF 43 BIOSIS COPYRIGHT 1995 BIOSIS
AN 76:232939 BIOSIS
DN BA62:62939
TI SIMULTANEOUS MEASUREMENT OF OXYGEN CARBON DI OXIDE AND WATER VAPOR EXCHANGE IN INTACT PLANTS.
AU KAPLAN A; GALE J; POLJAKOFF-MAYBER A
SO J EXP BOT 27 (97). 1976 214-219. CODEN: JEBOA6 ISSN: 0022-0957

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L27 ANSWER 1 OF 6 BIOSIS COPYRIGHT 1995 BIOSIS
AN 94:267374 BIOSIS
DN 97280374
TI Superior vena cava syndrome: Rapid histologic diagnosis by ultrasound-guided transthoracic needle aspiration biopsy.
AU Ko J-C; Yang P-C; Yuan A; Chang D-B; Yu C-J; Wu H-D; **Lee L-N**; Kuo S-H; Luh K-T
CS Dep. Intern. Med., Natl. Taiwan Univ. Hosp., No. 7, Chung-Shan South Road, Taipei 100, TAI
SO American Journal of Respiratory and Critical Care Medicine 149 (3 PART 1). 1994. 783-787.
AB We prospectively analyzed the diagnostic yield and safety of ultrasound (US)-guided transthoracic needle aspiration biopsy in the histologic diagnosis of 40 patients with superior vena cava (SVC) syndrome. During a 4-yr period, 40 patients with SVC obstruction were admitted to National Taiwan University Hospital. Of these patients 10 had histologic confirmation by sputum cytology (3 patients), fiberoptic bronchoscopy with biopsy (2 patients), or lymph node biopsy (5 patients) at admission. A total of 30 undiagnosed patients underwent **real-time** ultrasonographic (US) evaluation as well as color Doppler imaging. Patients with tumor detectable by US underwent US-guided transthoracic needle aspiration biopsy. Of the 30 patients who received US chest examination, 29 had widening of the upper mediastinal shadows in the chest radiographs. In 27 patients tumors were detected by chest US. After assessment of collateral vessels by color Doppler US, these 27 patients underwent US-guided transthoracic needle aspiration biopsies; histologic diagnoses were confirmed in 25. The diagnostic yield was 83.3%. The mean duration from admission to histologic diagnosis was 2.1 days. None of the patients developed complications. We conclude that chest US and color Doppler images are useful tools for evaluation of patients with SVC syndrome. US-guided transthoracic needle aspiration biopsy appears to be a safe, effective, and rapid approach for obtaining an accurate histologic diagnosis. Specific treatment can thus be initiated without delay.

L27 ANSWER 2 OF 6 BIOSIS COPYRIGHT 1995 BIOSIS
AN 91:431428 BIOSIS
DN BA92:87593
TI AUTOMATED GENETIC ANALYSIS.
AU MAYRAND P E; ROBERTSON J; ZIEGLE J; HOFF L B; **MCBRIDE L J**; CHAMBERLAIN J S; KRONICK M N
CS APPLIED BIOSYSTEMS INC., 850 LINCOLN CENT. DR., FOSTER CITY, CALIF. 94404.
SO ANN BIOL CLIN 49 (4). 1991. 224-230. CODEN: ABCLAI ISSN: 0003-3898
AB Automation of several new, non-traditional techniques for genetic analysis has now become possible. A new system is described that performs gel electrophoretic analysis of DNA including VNTRs, gene segments, and restriction enzyme digests. The instrument detects emitted fluorescence from labled DNA segments in **real-time** as they electrophore through a gel matrix past a scanning laser beam. Molecular length determination and band

quantification is accomplished by comparison to an in-lane standard. Since DNA segments can be labled and detected with any of four different dyes, the simultaneous analysis of similar length segments fron different reactions within a single lane is possible. PCR products are analyzed for research in the areas of human identification and genetic disease. These examples illustrate how automation will play key role in this new era of genetic analysis.

L27 ANSWER 3 OF 6 BIOSIS COPYRIGHT 1995 BIOSIS
AN 91:158894 BIOSIS
DN BA91:84694
TI AUTOMATION OF SPECIFIC HUMAN GENE DETECTION.
AU MAYRAND P E; HOFF L B; **MCBRIDE L J**; BRIDGHAM J A; CATHCART R; CORCORAN K P; GOLDA G S; KEITH D H; LACHENMEIER E W; ET AL
CS APPLIED BIOSYSTEMS INC., 850 LINCOLN CENTER DR., FOSTER CITY, CALIF. 94404.
SO CLIN CHEM 36 (12). 1990. 2063-2071. CODEN: CLCHAU ISSN: 0009-9147
AB An instrument/chemistry system is described that automates a new chemical procedure functionally equivalent to Southern blotting. A fluorescence gel scanner that detects migrating DNA fragments in **real-time** analyzes the samples produced by a prototype liquid-handling instrument that automates a solution-phase hybridization/solid-phase capture chemistry for DNA analysis. The combination of this chemistry for DNA analysis. The combination of this chemistry, the gel scanner, and robotic automation eliminates the tedium encountered in traditional manual methods for specific gene detection and reduces analysis time from days to hours. Restriction fragment lengths are measured with high precision by comparison with in-lane standards to minimize effects attributable to migration anomalies. The utility of this automated system is demonstrated by executing a clinical research application involving hybridization to a multi-copy repeat sequence on the Y chromosome and its detection.

L27 ANSWER 4 OF 6 BIOSIS COPYRIGHT 1995 BIOSIS
AN 90:473358 BIOSIS
DN BA90:112778
TI ULTRASONIC EVALUATION OF CERVICAL LYMPHADENOPATHY.
AU CHANG D-B; YANG P-C; LUH K-T; WU H-D; **LEE L-N**; KUO S-H; LEE Y-C
CS NATL. TAIWAN UNIV. HOSP., NO. 1 CHANG-TE ST., TAIPEI, TAIWAN.
SO J FORMOSAN MED ASSOC 89 (4). 1990. 286-292. CODEN: TIHHAH ISSN: 0371-7682
AB Seventy-seven patients with various underlying diseases underwent **real-time** ultrasonographic study of the neck. The sonography of lymph nodes can be round or ovoid shaped, discrete hypoechoic nodules, or multiple confluent lobulated heterogeneous or homogeneous hypoechoic masses. Venous invasion by a malignant lymph node can also be demonstrated by ultrasonography as a loss of echogenicity in the vessel wall. Twenty-five patients with malignant cervical lymph nodes showed homogeneous discrete hypoechoic nodules. Eleven patients with malignant lymph nodes showed a multiple confluent lobulated hypoechoic picture, among them, 2 patients also

76. 4,577,110, Mar. 18, 1986, Optical apparatus and method for measuring the characteristics of materials by their fluorescence; William R. MacBride, et al., 250/461.2; 356/317, 417 [IMAGE AVAILABLE]

77. 4,551,827, Nov. 5, 1985, Fluorescent soundtrack readout system; Peter A. Custer, et al., 369/101; 352/1; 369/59, 97, 120 [IMAGE AVAILABLE]

78. 4,321,464, Mar. 23, 1982, Device for measuring vibration phase and amplitude; Robert C. Miller, 250/231.1; 73/655; 250/237G [IMAGE AVAILABLE]

79. 4,288,160, Sep. 8, 1981, Optical property measurement system and method; Fred P. Lodzinski, 356/73, 429 [IMAGE AVAILABLE]

80. 4,159,874, Jul. 3, 1979, Optical property measurement system and method; Leonard R. Dearth, et al., 356/73; 250/559.17; 356/418, 419 [IMAGE AVAILABLE]

81. 4,127,329, Nov. 28, 1978, Raman scattering system and method for aerosol monitoring; Richard K. Chang, et al., 356/301 [IMAGE AVAILABLE]

82. 4,019,819, Apr. 26, 1977, Optical property measurement and control system; Fred P. Lodzinski, 356/73; 162/263; 250/559.11, 559.16; 356/402, 405, 431; 364/526 [IMAGE AVAILABLE]

83. 3,992,100, Nov. 16, 1976, Paper machine optical monitoring device with integral standardizing optical window; Fred P. Lodzinski, et al., 356/73; 162/252, 263, DIG.10, DIG.11; 356/405; 364/524 [IMAGE AVAILABLE]

84. 3,811,007, May 14, 1974, FACSIMILE METHOD AND APPARATUS; Peter J. Unger, et al., 358/485, 302 [IMAGE AVAILABLE]

85. 3,676,856, Jul. 11, 1972, AUTOMATIC EDITING SYSTEM AND METHOD; Ron Manly, 364/419.17, 926, 927.2, 927.4, 928, 928.1, 929.1, 932, 932.7, 936, 938, 938.3, 943, 943.1, 943.2, 947, 948.1, 948.5, DIG.2 [IMAGE AVAILABLE]

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455/76; 370/24; 455/77 [IMAGE AVAILABLE]

58. 5,003,189, Mar. 26, 1991, Document-imaging illumination with fibre-optic intensity-adjust; John Vala, et al., 250/566, 223R, 227.24 [IMAGE AVAILABLE]

59. 4,993,802, Feb. 19, 1991, Randomizing optical converter for illumination beam and method utilizing same; David Concannon, et al., 385/115; 362/32; 385/147, 901 [IMAGE AVAILABLE]

60. 4,992,380, Feb. 12, 1991, Continuous on-stream monitoring of cooling tower water; Barbara E. Moriarty, et al., 436/55; 422/62, 82.02; 436/147, 150, 164 [IMAGE AVAILABLE]

61. 4,945,896, Aug. 7, 1990, Surgical retractor assembly having tissue viability sensor embedded therein; George F. Gade, 128/20, 691 [IMAGE AVAILABLE]

62. 4,919,536, Apr. 24, 1990, System for measuring velocity field of fluid flow utilizing a laser-doppler spectral image converter; Hiroshi Komine, 356/28.5, 28, 337, 338, 339, 432 [IMAGE AVAILABLE]

63. 4,900,934, Feb. 13, 1990, Apparatus for simultaneous visualization and measurement of fluorescence from fluorescent dye-treated cell preparations and solutions; George A. Peeters, et al., 250/461.2, 461.1 [IMAGE AVAILABLE]

64. 4,895,574, Jan. 23, 1990, Piezoelectric motivator for prosthetic devices; Larry Rosenberg, 623/24, 27, 57 [IMAGE AVAILABLE]

65. 4,875,227, Oct. 17, 1989, Anti-scatter grid system; Remo J. Rossi, et al., 378/154, 98.4; 976/DIG.429, DIG.435 [IMAGE AVAILABLE]

66. 4,852,579, Aug. 1, 1989, Photocharacterization and treatment of normal abnormal and ectopic endometrium; Dennis W. Gilstad, et al., 128/665; 250/461.2, 483.1 [IMAGE AVAILABLE]

67. 4,847,603, Jul. 11, 1989, Automatic closed loop scaling and drift correcting system and method particularly for aircraft head up displays; Clark E. Blanchard, 345/7; 340/980; 348/169; 359/630 [IMAGE AVAILABLE]

68. 4,829,552, May 9, 1989, Anti-scatter grid system; Remo J. Rossi, et al., 378/154, 98.4; 976/DIG.429 [IMAGE AVAILABLE]

69. 4,812,713, Mar. 14, 1989, Automatic closed loop scaling and drift correcting system and method; Clark E. Blanchard, 315/370; 348/813 [IMAGE AVAILABLE]

70. 4,791,300, Dec. 13, 1988, Miniature gamma camera; Lo I. Yin, 250/363.01, 366, 505.1 [IMAGE AVAILABLE]

71. 4,777,610, Oct. 11, 1988, Thickness monitor; Daniel L. Barwick, et al., 364/563; 250/224; 356/386; 364/469, 561 [IMAGE AVAILABLE]

72. 4,766,171, Aug. 23, 1988, Organic nonlinear optical substrates; Ronald N. DeMartino, 524/722; 252/582, 600; 359/326; 372/21; 524/725, 827 [IMAGE AVAILABLE]

73. 4,720,355, Jan. 19, 1988, Organic nonlinear optical substrates; Ronald N. DeMartino, 252/582, 600; 359/326; 372/21 [IMAGE AVAILABLE]

74. 4,717,508, Jan. 5, 1988, Organic nonlinear optical substrates; Ronald N. DeMartino, 252/583, 600; 359/326; 372/21 [IMAGE AVAILABLE]

75. 4,671,102, Jun. 9, 1987, Method and apparatus for determining distribution of fluids; Harold J. Vinegar, et al., 73/61.48, 38, 61.43; 250/573; 356/427; 378/52 [IMAGE AVAILABLE]

David Concannon, et al., 382/[illegible]

40. 5,149,972, Sep. 22, 1992, Two excitation wavelength video imaging microscope; Frederic Fay, et al., 250/461.1, 372, 461.2 [IMAGE AVAILABLE]

41. 5,146,362, Sep. 8, 1992, Infra-red extraction from illumination source; Gary Copenhaver, et al., 359/353; 353/55; 359/350, 839; 362/294, 373 [IMAGE AVAILABLE]

42. 5,144,457, Sep. 1, 1992, Integrated imaging assembly; Gary Copenhaver, et al., 358/474; 348/164 [IMAGE AVAILABLE]

43. 5,139,744, Aug. 18, 1992, Automated laboratory work station having module identification means; Carl Kowalski, 422/67, 63 [IMAGE AVAILABLE]

44. 5,125,748, Jun. 30, 1992, Optical detection module for use in an automated laboratory work station; Torleif O. Bjornson, et al., 356/414, 418; 422/63, 82.09 [IMAGE AVAILABLE]

45. 5,122,871, Jun. 16, 1992, Method of color separation scanning; Eli Israeli, et al., 358/515, 474, 486, 496 [IMAGE AVAILABLE]

46. 5,111,308, May 5, 1992, Method of incorporating a scanned image into a page layout; Abraham Bachar, 358/448; 345/115; 358/450, 451, 453; 382/284, 293 [IMAGE AVAILABLE]

47. 5,108,703, Apr. 28, 1992, Automated multi-purpose analytical chemistry processing center and laboratory work station; Dale R. Pfost, et al., 422/65, 67, 100; 436/47 [IMAGE AVAILABLE]

48. 5,104,621, Apr. 14, 1992, Automated multi-purpose analytical chemistry processing center and laboratory work station; Dale R. Pfost, et al., 422/67, 63, 65, 100, 102; 436/47 [IMAGE AVAILABLE]

49. 5,091,653, Feb. 25, 1992, Fiber optic dosimeter using electron trapping materials employing technique for eliminating background fluorescence; Ramon E. Creager, et al., 250/484.5 [IMAGE AVAILABLE]

50. 5,089,713, Feb. 18, 1992, Document-imaging illumination arrangements with intensity with adjustment; John Vala, et al., 250/566, 223R, 227.24 [IMAGE AVAILABLE]

51. 5,064,754, Nov. 12, 1991, Genomic sequencing method; Randell L. Mills, 435/6, 5, 91.51; 436/94, 173, 174, 175, 501; 935/77, 78 [IMAGE AVAILABLE]

52. 5,063,599, Nov. 5, 1991, Electronic image lift; David Concannon, et al., 382/137; 250/352 [IMAGE AVAILABLE]

53. 5,063,461, Nov. 5, 1991, Packaging of components for image lift; Gary Copenhaver, et al., 358/474; 348/373 [IMAGE AVAILABLE]

54. 5,061,850, Oct. 29, 1991, High-repetition rate position sensitive atom probe; Thomas F. Kelly, et al., 250/306, 287, 309, 423F [IMAGE AVAILABLE]

55. 5,041,386, Aug. 20, 1991, Concentration cycles, percent life holding time and continuous treatment concentration monitoring in boiler systems by inert tracers; Claudia C. Pierce, et al., 436/50, 38, 52, 56, 150 [IMAGE AVAILABLE]

56. 5,020,411, Jun. 4, 1991, Mobile assault logistic kinetmatic engagement device; Larry Rowan, 89/1.11; 60/203.1; 89/8; 376/319 [IMAGE AVAILABLE]

57. 5,020,135, May 28, 1991, Computerized multistandard, field-convertible, multiregional/multiservice, remote controllable, remote programmable mobile two-way radio system with digital serial bus link, built-in programmer and autodiagnostics; Kaspar Kasparian, et al.,

250/559.08, 223R, 227.2, 227.23; 385/119 [IMAGE AVAILABLE]

22. 5,308,986, May 3, 1994, High efficiency, high resolution, real-time radiographic imaging system; James K. Walker, 250/370.11, 367, 368; 385/143, 145 [IMAGE AVAILABLE]

23. 5,307,146, Apr. 26, 1994, Dual-wavelength photometer and fiber optic sensor probe; Marc D. Porter, et al., 356/320; 250/227.23; 356/408, 410, 411, 412, 434, 435 [IMAGE AVAILABLE]

24. 5,304,492, Apr. 19, 1994, Spectrophotometer for chemical analyses of fluids; Gary Klinkhammer, 436/52; 250/343, 373, 458.1, 461.1; 356/417; 422/82.07, 82.08, 82.09; 436/84, 165, 172, 805 [IMAGE AVAILABLE]

25. 5,279,298, Jan. 18, 1994, Method and apparatus to identify and treat neovascular membranes in the eye; Robert W. Flower, 128/633, 664; 351/206, 221; 606/4 [IMAGE AVAILABLE]

26. 5,268,305, Dec. 7, 1993, Multi-optical detection system; Hans O. Ribi, et al., 436/501; 422/68.1, 82.05, 82.08, 82.09; 435/291; 436/164, 172, 527, 528, 531, 805 [IMAGE AVAILABLE]

27. 5,266,272, Nov. 30, 1993, Specimen processing and analyzing systems with a station for holding specimen trays during processing; Christopher D. Griner, et al., 422/104; 211/126; 312/305, 319.1; 422/63, 65, 102 [IMAGE AVAILABLE]

28. 5,264,961, Nov. 23, 1993, Techniques for trapping beams of infra-red energy; Gary Copenhaver, et al., 359/350; 353/55; 359/839; 362/294, 373 [IMAGE AVAILABLE]

29. 5,264,906, Nov. 23, 1993, Bioluminescence bathyphotometer; Kenneth M. Ferer, et al., 356/28; 250/559.01; 422/52 [IMAGE AVAILABLE]

30. 5,262,644, Nov. 16, 1993, Remote spectroscopy for raman and brillouin scattering; John F. Maguire, 250/339.08, 339.07, 339.12; 356/73, 301, 346 [IMAGE AVAILABLE]

31. 5,259,043, Nov. 2, 1993, Filtering illumination for image lift; David Concannon, et al., 382/137; 250/208.1; 382/260, 321 [IMAGE AVAILABLE]

32. 5,255,107, Oct. 19, 1993, Integrated multi-beam imaging assembly; Gary Copenhaver, et al., 358/474; 250/332, 334; 378/98.3 [IMAGE AVAILABLE]

33. 5,221,518, Jun. 22, 1993, DNA sequencing apparatus; Randell L. Mills, 422/62, 67, 82.05; 435/291; 436/89 [IMAGE AVAILABLE]

34. 5,220,172, Jun. 15, 1993, Fluorescence analyzer for lignin; John W. Berthold, et al., 250/461.1; 162/49; 250/458.1, 459.1 [IMAGE AVAILABLE]

35. 5,216,483, Jun. 1, 1993, Fluorescence analyzer for lignin; John W. Berthold, et al., 356/318; 162/49; 250/461.1 [IMAGE AVAILABLE]

36. 5,206,568, Apr. 27, 1993, Coordinated control of stepper motors; Torleif O. Bjornson, et al., 318/568.1, 568.2, 685, 696 [IMAGE AVAILABLE]

37. 5,199,054, Mar. 30, 1993, Method and apparatus for high resolution inspection of electronic items; John A. Adams, et al., 378/21, 22, 124, 138, 143, 145 [IMAGE AVAILABLE]

38. 5,157,516, Oct. 20, 1992, Method of incorporating a scanned image into a page layout; Abraham Bachar, 358/451, 448 [IMAGE AVAILABLE]

39. 5,155,776, Oct. 13, 1992, Filtering illumination for image lift;

Copenhaver, et al., 359/396; 359/[illegible] [IMAGE AVAILABLE]

4. 5,424,186, Jun. 13, 1995, Very large scale immobilized polymer synthesis; Stephen P. A. Fodor, et al., 435/6; 436/518, 527, 528, 809; 536/25.3, 25.31, 25.32 [IMAGE AVAILABLE]

5. 5,422,474, Jun. 6, 1995, Methods for document illumination; John Vala, et al., 250/208.1, 226 [IMAGE AVAILABLE]

6. 5,420,959, May 30, 1995, High efficiency, high resolution, real-time radiographic imaging system; James K. Walker, et al., 385/143; 250/368; 385/145 [IMAGE AVAILABLE]

7. 5,408,085, Apr. 18, 1995, Document imaging system with human-eye response photoptic filter means; John Vala, et al., 250/208.1, 226 [IMAGE AVAILABLE]

8. 5,399,877, Mar. 21, 1995, Radiation sensitive area detection device and method; Daniel C. Carter, et al., 250/581, 228, 584, 585, 586; 356/236 [IMAGE AVAILABLE]

9. 5,383,023, Jan. 17, 1995, Method and apparatus for performing dual-beam dual-wavelength fluorescence spectrophotometric evaluation of a biological specimen; Jan Walleczek, 356/417; 250/459.1; 356/317 [IMAGE AVAILABLE]

10. 5,369,566, Nov. 29, 1994, User programmable control; Dale R. Pfost, et al., 364/147, 140, 497, 926.9, 949, DIG.2; 395/375 [IMAGE AVAILABLE]

11. 5,367,386, Nov. 22, 1994, Image scanning apparatus adapted for thermally and optically isolating imaging components; Gary Copenhaver, et al., 358/474, 401, 475, 498 [IMAGE AVAILABLE]

12. 5,363,463, Nov. 8, 1994, Remote sensing of physical variables with fiber optic systems; Marcos Y. Kleinerman, 385/123; 250/227.11, 227.18, 227.22, 227.23; 356/319, 320, 432, 445; 359/115, 124; 385/12, 13, 126, 127 [IMAGE AVAILABLE]

13. 5,353,799, Oct. 11, 1994, Examination of subjects using photon migration with high directionality techniques; Britton Chance, 128/664, 665; 356/319; 364/413.09, 550 [IMAGE AVAILABLE]

14. 5,352,963, Oct. 4, 1994, Specimen processing and analyzing systems with variable zener-diode flyback stepper motor control; Steven A. Garand, et al., 318/696, 685 [IMAGE AVAILABLE]

15. 5,350,922, Sep. 27, 1994, Underwater light scattering sensor; Robert Bartz, 250/338.5, 574, 575; 356/338, 340, 342 [IMAGE AVAILABLE]

16. 5,345,395, Sep. 6, 1994, Specimen processing and analyzing systems and methods using photometry; Christopher D. Griner, 364/497, 500; 422/65 [IMAGE AVAILABLE]

17. 5,333,487, Aug. 2, 1994, Spark-excited fluorescence sensor; Hiroshi Kimura, et al., 73/23.31, 1G; 356/313 [IMAGE AVAILABLE]

18. 5,325,217, Jun. 28, 1994, Color separation scanner; Michael Nagler, et al., 358/506, 475, 487, 509 [IMAGE AVAILABLE]

19. 5,321,527, Jun. 14, 1994, Integrated document imaging assembly; Gary Copenhaver, et al., 358/474; 348/164 [IMAGE AVAILABLE]

20. 5,313,542, May 17, 1994, Apparatus and method of rapidly measuring hemispherical scattered or radiated light; Raymond J. Castonguay, 385/115; 250/227.28; 356/337, 340, 343 [IMAGE AVAILABLE]

21. 5,313,070, May 17, 1994, Check imaging illumination with focus/defocus and fibre optic light guide means; John Vala, et al.,

INVENTOR: David H. Tracy , Norwalk, CT
Paul G. Saviano , Norwalk, CT
SEARCH-FLD: 156/345, 643, 626; 204/192E, 298

ABSTRACT:
Pressurized gas is applied between a wafer and electrode in a plasma etching system. Gas between the wafer and electrode provides cooling of the wafer. A control arrangement maintains the gas at a predetermined pressure.

```
         70848 REAL
       1227935 TIME
         30225 REAL TIME
                 (REAL(W)TIME)
        199374 AMPLIF?
L24      12263 REAL TIME AND AMPLIF?

=> s l24 and fluorescen?
         41357 FLUORESCEN?
L25        604 L24 AND FLUORESCEN?

=> s real time(l)amplif?
         70848 REAL
       1227935 TIME
         30225 REAL TIME
                 (REAL(W)TIME)
        199374 AMPLIF?
L26        9842 REAL TIME(L)AMPLIF?

=> s l26(l)fluorescen?
         41357 FLUORESCEN?
L27        403 L26(L)FLUORESCEN?

=> s l27(l)((fiber or fibre)(w)optic#)
        128229 FIBER
         18000 FIBRE
         50067 OPTIC#
L28         85 L27(L)((FIBER OR FIBRE)(W)OPTIC#)

=> s l28(l)(determ? or det## or detect?)
        836718 DETERM?
          7333 DET##
        397521 DETECT?

L29         85 L28(L)(DETERM? OR DET## OR DETECT?)

=> s l29 and system#
        966606 SYSTEM#
L30         85 L29 AND SYSTEM#

=> s l29(l)system#
        966606 SYSTEM#
L31         85 L29(L)SYSTEM#

=> s l31 not l23
L32         85 L31 NOT L23

=> d 1-85; fil hom

1.  5,435,307, Jul. 25, 1995, Surface fluorescent monitor; Walter S.
Friauf, et al., 128/633, 634, 665 [IMAGE AVAILABLE]

2.  5,427,915, Jun. 27, 1995, Multi-optical detection system; Hans O.
Ribi, et al., 435/7.92; 422/82.05, 82.09, 82.11; 435/7.93, 7.94, 7.95,
970; 436/527, 528, 532 [IMAGE AVAILABLE]

3.  5,426,530, Jun. 20, 1995, Extraction and trapping of IR; Gary
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To calibrate a photodetector, a rotating disk with a slot is disposed in a light beam with decreasing speed from a defined maximum rotational speed to a defined minimum speed, while magnitudes and times of signals are read out and stored. Vernier pairs of signals occur in adjacent readout intervals, and non-vernier signals exclude the verniers. Readout times for verniers are used to estimate a preliminary function of rotations versus time. From the function are estimated an occurrence time for each pair and period of disk rotation at the time. Vernier fraction is the ratio of one signal in the pair to the sum of the pair. A time offset is the product of vernier fraction, slot fraction of the disk and the estimated period. Occurrence times corrected with the time offset are utilized to fit a corrected function of disk rotations versus time. Points of time for the non-vernier signals are determined from the corrected function, each point corresponding to disk rotations to a corresponding non-vernier signal. These points of time are employed with corresponding signals for linearly calibrating the photodetector.

US PAT NO: 5,188,934 [IMAGE AVAILABLE] L23: 6 of 9
TITLE: 4,7-dichlorofluorescein dyes as molecular probes
DATE ISSUED: Feb. 23, 1993
INVENTOR: Steven M. Menchen, Fremont, CA
Linda G. Lee , Palo Alto, CA
Charles R. Connell , Redwood City, CA
N. Davis Hershey, San Carlos, CA
Vergine Chakerian, San Mateo, CA
Sam Woo, Redwood City, CA
Steven Fung, Palo Alto, CA
SEARCH-FLD: 435/6, 91, 172.3, 968; 436/800; 549/224, 382; 935/78, 77

ABSTRACT:
Long wavelength, narrow emission bandwidth fluorecein dyes are provided for detecting spacially overlapping target substances. The dyes comprise 4,7-dichlorofluoresceins, and particularly 1',2',7',8'-dibenzo-4,7-dichlorofluoresceins. Methods of using the dyes in automated DNA sequencing are described.

US PAT NO: 5,187,085 [IMAGE AVAILABLE] L23: 7 of 9
TITLE: Nucleic acid sequence analysis with nucleoside-5'-O-(1-thiotriphosphates)
DATE ISSUED: Feb. 16, 1993
INVENTOR: Linda G. Lee , Palo Alto, CA
SEARCH-FLD: 435/6, 91, 172.3, 968; 436/501, 800, 811; 935/78, 88

ABSTRACT:
A chain-termination method of nucleic acid sequence determination is provided wherein nucleoside triphosphate precursors are replaced with their 1-thiotriphosphate analogs in the polymerization step. This substitution results in more uniform bands of electrophoretically separated DNA fragments which, in turn, results in more accurate base determination.

US PAT NO: 5,093,245 [IMAGE AVAILABLE] L23: 8 of 9
TITLE: Labeling by simultaneous ligation and restriction
DATE ISSUED: Mar. 3, 1992
INVENTOR: Douglas H. Keith, Oakland, CA
Mel N. Kronick, Palo Alto, CA
Lincoln J. McBride , Redwood City, CA
Norman M. Whiteley, San Carlos, CA
SEARCH-FLD: 435/6, 91, 35, 810; 536/27

ABSTRACT:
Termini of restricted double-stranded DNA fragments are modified by ligating the fragments with terminal phosphate-free double-stranded oligonucleotides having a complementary terminus in the presence of a restriction enzyme and a ligase, where joining of the complementary ends results in loss of the restriction enzyme recognition sequence.

US PAT NO: 4,615,755 [IMAGE AVAILABLE] L23: 9 of 9
TITLE: Wafer cooling and temperature control for a plasma etching system
DATE ISSUED: Oct. 7, 1986

Steven Fung, Palo Alto, CA
N. Davis Hershey, San Carlos, CA
Linda G. Lee , Palo Alto, CA
Steven M. Menchen, Fremont, CA
Sam L. Woo, Redwood City, CA
SEARCH-FLD: 435/6

ABSTRACT:
A spectrally resolvable set of rhodamine dyes are provided for use in the chain termination method of nucleic acid sequencing. A different rhodamine dye from the group consisting of tetramethylrhodamine, rhodamine X, rhodamine 6G, and rhodamine 110 is attached to the base of each of the dideoxynucleotides used in the sequencing method by way of an alkynylamino linker. Preferably, the labeled dideoxynucleotides are incorporated into the growing DNA chains by Taq DNA polymerase.

US PAT NO: 5,303,165 [IMAGE AVAILABLE] L23: 3 of 9
TITLE: Standardizing and calibrating a spectrometric instrument
DATE ISSUED: Apr. 12, 1994
INVENTOR: Alan M. Ganz , Trumbull, CT
David H. Tracy , Norwalk, CT
Robert A. Hoult, Beaconsfield, England
SEARCH-FLD: 364/571.01, 571.02, 571.03, 571.04, 571.05, 571.07, 571.08, 498, 581, 582, 572; 356/319, 323, 325, 326, 328, 331, 334; 250/252.1A

ABSTRACT:
A spectrometric instrument which exhibits an intrinsic profile for a sharp spectral line produces profile data for narrow spectral lines. The spectral lines are effected with a high finesse etalon of gold coated polymer. A transformation filter is computed for transforming the profile data to a gaussian profile. A wavelength calibration is combined with the filter to effect a correction matrix which is applied to sample data to generate calibrated standardized data. Iteratively a correction matrix is applied to calibration data to generate standardized calibration data which is utilized for the wavelength calibration. Calibration is effected with an optical standard, an interference etalon and a fringe formula. Etalon effective thickness is first estimated and then precisely determined so that fringe peaks calibrate wavelength.

US PAT NO: 5,282,543 [IMAGE AVAILABLE] L23: 4 of 9
TITLE: Cover for array of reaction tubes
DATE ISSUED: Feb. 1, 1994
INVENTOR: Enrico Picozza, Newtown, CT
Timothy M. Woudenberg , Bethel, CT
Robert Ragusa, Newtown, CT
Ralph Keese, Trumbull, CT
SEARCH-FLD: 422/99, 102; 435/287, 293, 300, 301, 316, 809; 100/211; 220/524, 525, 526, 23.4, 23.83, 255; 428/132, 137, 172

ABSTRACT:
An array of reaction tube covers adapted to seal a plurality of reaction tubes comprises a unitary body of flexible material having a plurality of flexible plastic nodules. Each nodule is adapted to seal one of the reaction tubes. Each of the nodules is flexible held in a predetermined planar spaced relationship from each other in rows, preferably in rows and columns, by an integral web having a plurality of apertures therethrough. Each of the nodules has a downwardly convex, generally hemispherical lower portion extending from the web, an upwardly convex upper portion extending from the web over the lower portion, and a centrally domed nipple extending upwardly from the upper portion.

US PAT NO: 5,229,838 [IMAGE AVAILABLE] L23: 5 of 9
TITLE: Photodetector amplitude linearity
DATE ISSUED: Jul. 20, 1993
INVENTOR: Alan M. Ganz , Trumbull, CT
David H. Tracy , Norwalk, CT
SEARCH-FLD: 356/300, 308, 319, 325, 323, 326, 328, 218, 222, 225; 250/252.1A

ABSTRACT:

L15 3 L4 AND (L5 OR L6 OR L7 OR L8 OR L9 OR L10)

=> s 15 and (16 or 17 or 18 or 19 or 110); s 16 and (17 or 18 or 19 or 110); s 7 and (18 or 19 or 110); s 18 and (19 or 110); s 19 and 110; s 11 or 13 or 14 or 15 or 16 or 17 or 19 or 18 or 110
L16 0 L5 AND (L6 OR L7 OR L8 OR L9 OR L10)

L17 2 L6 AND (L7 OR L8 OR L9 OR L10)

L18 0 L7 AND (L8 OR L9 OR L10)

L19 0 L8 AND (L9 OR L10)

L20 0 L9 AND L10

L21 86 L1 OR L3 OR L4 OR L5 OR L6 OR L7 OR L9 OR L8 OR L10

=> s 121 and amplif?
199374 AMPLIF?
L22 6 L21 AND AMPLIF?

=>
=> s 114 or 115 or 117 or 122
L23 9 L14 OR L15 OR L17 OR L22

=> d 1-9 .bevpat; s real time and amplif?
US PAT NO: 5,428,558 [IMAGE AVAILABLE] L23: 1 of 9
TITLE: Correction of spectra for stray radiation
DATE ISSUED: Jun. 27, 1995
INVENTOR: Jerry E. Cahill, Trumbull, CT
Alan M. Ganz , Trumbull, CT
Paul Saviano , Norwalk, CT
David Tracy , Norwalk, CT
Yongdong Wang, Norwalk, CT
SEARCH-FLD: 73/1G; 250/252.1; 356/307; 364/498, 571.01, 571.02, 571.04

ABSTRACT:
A method and apparatus are provided for correction of spectra for stray radiation in a spectrometric instrument, involving a sequence of steps as follows. Spectral patterns are obtained with the instrument initially for monochromatic radiation at a plurality of selected calibration wavelengths. By computer program, the peak profile at the calibration wavelength in each pattern is replaced with a substitute based on the remaining pattern. The resulting data are interpolated to effect values denoted "stray proportions" for the ordered wavelengths of the instrument. Spectral data at each ordered wavelength are obtained with the instrument for a sample, and multiplied in the computer program by stray proportions for corresponding wavelengths to effect further sets of values denoted "stray portions" that are identified to the ordered wavelengths. Each set is identified to one of the wavelength increments of the instrument across the spectral range. In each set, the stray portions for the ordered wavelengths are summed. The total for each wavelength increment is subtracted from the original sample data for the increment to effect spectral data corrected for stray.
US PAT NO: 5,366,860 [IMAGE AVAILABLE] L23: 2 of 9
TITLE: Spectrally resolvable rhodamine dyes for nucleic acid sequence determination
DATE ISSUED: Nov. 22, 1994
INVENTOR: B. John Bergot, Redwood City, CA
Vergine Chakerian, San Mateo, CA
Charles R. Connell , Redwood City, CA